### Q3 FY17

Key

(1) In Progress

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(4) On-Going

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7/33/2037 Date of status update (ERASC responses take an extended length of time to develop.)

	Ividid-region requests are s	hown under each of the req	uesting regions.						1		
Program / Regional Office	Program / Regional Office Contact	Technical Support Center	Center Contact	Center Contact Phone	Requestor	Request Date	Status	Site Name	City	State	Description
International	Julius Enriquez	Engineering	John McKernan	513-569-7416	International	6/30/2017	(3) Completed	International request	Jerusalem	Israel	Barb Butler, Julius Enriquez, and Ed Barth are participating in a teleconference on July 13th with Business Development Associate – Chemistry & Physics Department of The Hebrew University of Jerusalem to discuss EPA's experience with soil washing technology for remediating hazardous waste sites. NRMRL has experience with soil and sediment washing processes, which was used to remediate land used to construct the housing and business district areas for the London Olympics Village.
OLEM/Office of Superfund Remediation and Technology Innovation – Emergency Response Team [Region 2]	Marc Greenberg	Ecological Risk Assessment	Mike Kravitz	513-569-7740	Marc Greenberg (OSWER/OSRTI-ERT [R02]) Katie Matta (R03) Bruce Pluta (R03) Carolyn Bury (R05) Bruce Duncan (R10)	7/13/2017	(1) In Progress				ERASC Request #021 Question: "Should we incorporate climate change issues in ecological risk assessments of contaminated sites?" Response Document Title: Climate Change Issues In Ecological Risk Assessments at Hazardous Waste Sites. Status Update: Response document is in initial stage of development.
Region 01	Ed Hathaway	Engineering	John McKernan	513-569-7415	Region 01	9/19/2016	(1) In Progress	Elizabeth Mine	Strafford	VT	Barbara Butler was asked to provide a review of the remedial investigation/feasibility study for passive treatment use at the site. Dr. Butler provided suggestions for improvement of the pilot treatment design. A field pilot for the passive treatment system is being constructed to treat mine influenced waters (MIW) flowing from the repository. The pilot is designed at 30% scale of the actual size needed to meet treatment volumes for the site. Dr. Butler also suggested possible bench testing of liners and characterization of seed material would help the study, which is being considered in the pilot construction currently underway.
Region 01	Carol Keating	Engineering	John McKernan	513-569-7415	Region 01	2/10/2017	(1) In Progress	Ft. Devens	Ft. Devens	MA	Dr. Robert Ford continues to provide technical support to this site. Field studies to support cleanup at Fort Devens Superfund Site are scheduled for August 21-24. Bot Lien, Patrick Clark, Steven Acree, Randall Ross and Robert Ford are conducting field research designed to provide performance verification for groundwater remediatio and to facilitate testing of the beta version of an ORD/NRMRL analysis tool for evaluating groundwater seepage flux. NRMRL is providing technical assistance to Region 1 to investigate the impact of recently implemented remedial measures on groundwater flow and contaminant transport. This work is being performed jointly through the Engineering Technical Support Center and Ground Water Technical Support Center. Fort Devens is a former military training base with ground water, soil, and sediment contamination. Technical support for this site is ongoing.
Region 01	Cheryl Sprague	Groundwater	David Burden	580-436-8606	Region 01	3/1/2017	(3) Completed	Beede Waste Oil Superfund Site	Plaistow	NH	Reviewed and provided comments on the Draft Phase 2 Steam Enhanced Extraction (SEE) Updated Operations & Maintenance Plan, the Draft Phase 2 Steam Enhanced Extraction Demonstration of Compliance Plan, and the Draft Phase 3 Steam Enhanced Extraction Construction Quality Assurance Project Plan.

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Region 01	Karen Lumino	Groundwater	David Burden	580-436-8606	Region 01	4/3/2017	(3) Completed	Commerce Street Superfund Site	Williston	VT	Provided a preliminary technical review on the Commerce Street Plume Site Remedial Design Workplan. Comments and recommendation were provided on the upcoming bench and pilot scale studies that may impact the design and outcome.
Region 01	Jim Brown	Groundwater	David Burden	580-436-8606	Region 01	3/3/2017	(3) Completed	South Municipal Water Supply Superfund Site	Peterborough	NH	Reviewed and provided comments on the Electrical Resistance heating (ERH) Remedial Action Construction Completion Report.
Region 02	Jane Dolan	Engineering	John McKernan	513-569-7415	Region 2	6/9/2017	(1) In Progress	Defense Fuel Support Point (DFSP) Melville Naval Station Newport	Portsmouth	RI	Dr. Carolyn Acheson, Dr. Marc Mills and Jennifer Goetz provided assistance for this request. The Remedial Project Manager, Jane Dolan and Superfund Technical Liaison, Jan Szaro requested assistance in collecting samples and analyzing them for PFASs. The site where the support is being requested is the Defense Fuel Support Point (DFSP) Melville Naval Station Newport, Portsmouth, Rhode Island. The depth of support includes split sampling with the Navy and their contractor to verify results they obtain by comparing them to EPA results. Technical support is being requested because the current method used by the Navy is intended for use on other matrices different than the samples being collected. The EPA data gathered from this event will also inform investigators on the variability in this sample mixing, and variability between samples collected in close proximity to one another. Sampling is expected to occur the week of July 17, 2017.
Region 02	Raymond Klimcsak	Engineering	John McKernan	513-569-7415	Region 2	3/15/2017	(3) Completed	SHERWIN- WILLIAMS/HILLIARDS CREEK	Gibbsboro	NJ	Ronald Herrmann provided assistance for this request. The RPM requested Ron review the draft site work plan, with a focus on Light Non-Aqueous Phase Liquid (LNAPL) microbial degradation. A technical review was provided by Mr. Herrmann, and a draft memorandum providing observations on the potential for LNAPL biodegradation was provided to the RPM. No additional technical support has been requested this quarter.
Region 02	John DiMartino	Groundwater	David Burden	580-436-8606	Region 02	4/27/2017	(3) Completed	Diaz Chemical Corporation OU2 Superfund Site	Holley	NY	Reviewed and provided technical comments on the 90% In-Situ Thermal Treatment Work Plan Phase 1 for the Diaz Chemical Site. Also reviewed and commented on the Draft Uniform Federal Policy Quality Assurance Project Plan for Air Sampling and Confirmation Analyses for the In-Situ Thermal Remediation.
Region 02	Mike Sivak	Site Characterization and Monitoring	Felicia Barnett	404 562-8659	Region 02	7/11/2017	(1) In Progress	Atlantic Fleet Weapons Training Area	Vieques	PR	Federal Facility has submitted the RI for the site. Specifically, UXO (Unexploded Ordinance) 16 Operating Unit 1, the water off of Solid Waste Management Unit 4 contains background sediment samples and derived summary statistics from the data set to compare with onsite data from the offshore sediments. The Region has requested SCMTSC support in reviewing this document for technical accuracy. The review will assist the region in selecting the best remedy at the site in order to protect human health and the environment.
Region 02	Tim Frederick	Superfund Health Risk Assessment	Teresa Shannon	513-569-7596	Tim Frederick, Region 4	5/8/2017 Page 2 c	(3) Completed	No site	N/A	N/A	Request for review of a publication (Wang et al. [2017]; provided two questions). Ar attached response was sent via email to requestor 5/11/17, no follow up. Completed.

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Region 02	Gina Ferreira	Superfund Health Risk Assessment	Teresa Shannon	513-569-7596	Gina Ferreira, Region 2	5/1/2017	(4) On-Going	St. Croix Waste Oil Services, Inc.	Christiansted	VI	Request for information on the use of Protective Concentration Levels compared to Regional Screening Levels at a RCRA site. Email was forwarded and a toxicological search was done for four chemicals. This was forwarded to the requestor and she was referred to Michele Burgess if she had further questions. On-Going.
Region 03	Bruce Pluta and Katie Matta	Ecological Risk Assessment	Mike Kravitz	513-569-7740	Marc Greenberg (OSWER/OSRTI-ERT [R02]) Katie Matta (R03) Bruce Pluta (R03) Carolyn Bury (R05) Bruce Duncan (R10)	7/13/2017	(1) In Progress				ERASC Request #021 Question: "Should we incorporate climate change issues in ecological risk assessments of contaminated sites?" Response Document Title: Climate Change Issues In Ecological Risk Assessments at Hazardous Waste Sites. Status Update: Response document is in initial stage of development.
Region 03	Josh Barber	Engineering	John McKernan	513-569-7415	Region 3	12/15/2015	(4) On-Going	Contaminated sites in the Philadelphia area	Philadelphia	РА	Drs. Steve Rock, Kirk Scheckel, Mark Johnson, Todd Luxton, and others from the Region and OLEM participated in a workgroup to determine and evaluate performance measures for the remedial success of using soil amendments for remediation and revitalization of metals contaminated sites. Performance measure being tested include vegetative cover, plant root depth, soil organic carbon content pH changes, nutrient content, change in total contaminant concentration, and change in contaminant bioavailability. Discussion of the rationale for selection of a performance measure to demonstrate success of the amendment for remediation will be documented in study findings at a later date. Last quarter, the RPM and STL from Region 3 requested technical support to review and respond to community stakeholder and contractor comments on the PAH Background Study. No additional technical support has been requested this quarter.
Region 03	Dr. Jonathan Essoka	Engineering	John McKernan	513-569-7415	Region 3	5/30/2017	(3) Completed	Health risk questions associated with creosote treated railroad ties	Philadelphia	PA	Dr. Ed Barth facilitated this technical support request by garnering Region 3 remediation and Office of Pollution Prevention and Toxics (OPPT) pesticide expertise. The requestor received a number of requests from concerned parents in Philadelphia, PA, that live in neighborhoods near railroad tracks. Parents complained that when they were walking near the rail bed (but still in their neighborhood), they saw a large quantity of railroad ties lying near the tracks and they smelled a strong odor that made them 'sick'. At the same time, some parents who take their young children to a nearby playground expressed concern about railroad ties being used to frame playground beds with mulch and other surfacing materials used underneath playground slides and swings. Citizen concerns and questions focused on the possible use/presence of creosote-treated railroad ties an vapor exposures and, perhaps, contamination of the surfacing materials in the playgrounds. [Dr. Barth provided information for OPPT individuals that are knowledgeable in creosote treatment of wood, and associated risks to Mr. Essoka.] This information assisted Region 3 in developing a response and course of action. No additional technical support requests have been received this quarter, and the support request is being closed.

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Region 03	Lisa Denmark	Groundwater	David Burden	580-436-8606	Region 03	3/21/2017	(3) Completed	Hanlin-Allied-Olin Superfund Site	Moundsville	wv	Reviewed and provided technical comments on selected documents related to site investigations and data collection efforts at the Hanlin-Allied-Olin Superfund Site. Specifically the Region requested feedback regarding the method for determining the soil-water partition coefficient for mercury ( $K_d$ value).
Region 03	Joshua Barber	Site Characterization and Monitoring	Chris Sibert Dale Werkema	702-798-2234	Region 03	9/24/2014	(4) On-Going	Clearview Landfill	Delaware and Philadelphia Counties	РА	SCMTSC is providing support on investigating groundwater/ surface water interactions/discharges at the site. SCMTSC staff will be working with USGS-Storrs to see about providing possible support in locating potential/probable groundwater seeps into the river using distributed temperature sensing (DTS). This would include field data collection, data processing, interpretation and reporting. If deemed necessary and per the results, determining the ground water flux entering the stream at locations to be determined. The RPM will consider instrumenting the site for a long term geophysical monitoring of remediation processes and site dynamics as it would influence contamination fate and transport and remediation effectiveness. Determining the groundwater/surface water interactions will assist in the site ecological evaluation and possibly assist in determining the effectiveness of the remedy.
Region 03	Joshua Barber	Site Characterization and Monitoring	Jan Szaro	617-918-1316	Region 03	3/6/2017	(3) Completed	Clearview Landfill/Lower Darby Creek	Delaware and Philadelphia Counties	РА	SCMTSC previously provided fingerprinting analysis comments on the Clearview Landfill – Lower Darby Creek PAHs (comments provided in late FY16). Because of the urban nature of PAHs in the environment (e.g. aerial deposition, flood events, combustible engine exhaust), the fingerprinting analysis could not determine which specific PAHs were directly contributed by the Clearview Landfill but it was able to identify the areas beyond which it is highly unlikely PAHs in the soil or sediment samples came from the landfill contamination. This information is being used to assist in the determination of the remediation area. Due to the wide spread nature of urban PAHs, the Region has requested the SCMTSC provide comments on and assist them with developing an approach for explaining to the community how the determination was made (concentration levels, distance, ground and surface water flow directions, etc.). Comments and assistance with the fingerprinting explanation was completed in June 2017.
Region 03	Michele Burgess	Superfund Health Risk Assessment	Teresa Shannon	513-569-7596	Fabio D'Agostino, National Council of Research (Italy)	5/2/2017	(3) Completed	No site	N/A	N/A	Request for assistance with writing a paper, specifically related to PAH toxicity value calcualtions. Being an international requestor, he was accepted through Michele Burgess and an official response was given via email between Burgess and the requestor. Completed.

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Region 04	Glenn Adams and Sharon Thoms	Ecological Risk Assessment	Mike Kravitz	513-569-7740	Sharon Thoms (R04) Glenn Adams (R04) Bruce Duncan (R10)	7/13/2017	(4) On-Going				ERASC Request #018 Question: "Geochemical Evaluations—Statistics or no Statistics?" Response Document Title: Separating Anthropogenic Metals Contamination from Background: A Critical Review of Geochemical Evaluations and Proposal of Alternative Methodology. Status Update: Response document is in final preparation (i.e., External peer review was completed. Comments are being addressed.).
Region 04	Felicia Barnett	Engineering	John McKernan	513-569-7415	Region 4	2/23/2016	(4) On-Going	Assistance with developing probabilistic risk assessments (PRA) for multiple sites in Region	Atlanta	GA	Per a request from Region 4 (Felicia Barnett), the Region is working with ORD to develop probabilistic risk assessments (PRAs) to be applied at a number of sites and operable units that will provide alternative clean-up levels that meet Federal and state regulations. These site-based PRAs could be precedent-setting nationally, and the Region would like to be able to continue accessing ORD expertise for PRA development. The ETSC, SCMTSC and ORD/NCEA are providing assistance. An additional technical support request was received for a site with mixed fuel contamination (TPH) that is now included in this effort. We continue to follow up with the mixed fuel contamination experts this quarter, and are providing feedback to the Region this quarter. In Q1 2017 the mixed fuel contamination request evolved into a combined effort of the TSCs to resolve the analysis and risk assessment issue with TPH. This issue is affecting several regions (Regions 4, 5, 7 and 9). Progress (teleconferences and document sharing/review) on this portion of the request regarding mixed fuel (TPH) PRAs has been made this quarter. Technical support for this request is on-going.
Region 04	Joe Alfano	Engineering	John McKernan	513-569-7415	Region 4	1/17/2017	(1) In Progress	HOLCOMB CREOSOTE	Yadkinville	NC	Dr. Ed Barth (NRMRL Cincinnati) and Dan Pope (NRMRL's Ground Water and Ecosystem Restoration Division, Ada, OK) are providing technical support for this site. The Region 4 RPM requested a review of the feasibility study for groundwater remediation options at the site. Ed and Dan are working to produce a draft memorandum that includes a technical review and observations regarding the remedial options. The draft memorandum will be delivered in early Q4 2017 to the Regional client. Support for this site is on-going.
Region 04	Lila Llamas	Groundwater	David Burden	580-436-8606	Region 04	5/4/1947	(3) Completed	Parris Island Marine Corp Recruit Depot, Site 45	Parris Island	sc	Provided technical review comments regarding the Summary of the Emulsified Vegetable Oil Pilot Test Study at the Former Morale, Welfare, and Recreation Dry Cleaning Facility (Site 45).
Region 04	Karl Wilson	Groundwater	David Burden	580-436-8606	Region 04	4/5/2017	(3) Completed	Southern Solvents Superfund Site	Tampa	FL	Reviewed and provided comments on the Revised Draft Focused Feasibility Study (FFS) Report for the Southern Solvents Superfund Site. The purpose of the FFS is to support the development of an Interim Record of Decision (ROD) to remove the bulk of the Carcinogenic Volatile Organic Compound mass from the subsurface soils.

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Region 04	Brad Jackson	Site Characterization and Monitoring	Jan Szaro	617-918-1316	Region 04	2/25/2017	(1) In Progress	B.F. Goodrich	Calvert City	KY	SCMTSC has previously provided B.F. Goodrich site. SCMTSC developed a Final Remedial Investigation (RI) Report, Human Health Risk Assessment (HHRA) and Ecological Risk Assessment (ERA) in August 2015. Additionally, SCMTSC created a 3-D model of the subsurface contamination to visually clarify where it is know contamination is entering the Tennessee River. Phase II sampling maps for continuation of the offshore investigation in the river were prepared. This additional sampling effort under the Tennessee River was conducted in mid-October. Sampling was completed, models and maps were updated after a meeting in Kentucky the second week in December.2016. After discussions with the State, the PRPs and OLEM, Region 4 is proceeding with the drafting and finalization of the feasibility study for the site. SCMTSC will be preparing the Feasibility Study to develop and document the remediation options and assist in determining the remedial actions to be performed.
Region 04	David Andrews	Site Characterization and Monitoring	Felicia Barnett / Jan Szaro	404-562-8659 / 617-918-1316	Region 04	6/29/2017	(4) On-Going	Epsom Salt/Mercury in concrete remediation research project	N/A		Region 4 is performing an ORD OSP supported applied research project on the use of magnesium sulfate (Epsom Salt) solution in mercury spill mitigation. The study involves the application of Epsom Salt solution after gross removal of elemental mercury to mitigate residual mercury contamination on concrete surfaces to reduce mercury vapors within work or residential air spaces to below risk-based concentrations. The Region has requested assistance with the very specific mercury speciation analysis required to perform the study and review comments on the study project plan.
Region 04	Galo Jackson	Site Characterization and Monitoring	Jan Szaro	617-918-1316	Region 04	2/29/17	(2) On Hold	LCP Chemical Mercury Cell	Brunswick	1	Region 4 requested support to characterize elemental mercury contamination at the Mercury Cell Building. The building area is located in the upland area of the 813 acre site. The remainder of the site consists primarily of tidal marsh. Facilities operating at the overall site have included an oil refinery, a paint manufacturing company, a power plant and a chlor-alkali plant. The SCMTSC reviewed various investigation reports and subsurface analytical data provided to recommend the development of a Conceptual Site Model (CSM) for the area. The PRPs have agreed to develop a CSM, and the SCMTSC will provide review comments to assist in determining a cost effective remediation option for the contamination.
Region 04	Galo Jackson	Site Characterization and Monitoring	Felicia Barnett	404-5632-8659	Region 04	7/5/2017	(3) Completed	LCP Chemical Mercury Cell	Brunswick	GA	Short term request needing information on the use of ASTM D4793 Standard Test for Sequential Batch Extraction of Waste with Water for determining the leachability of mercury in soil. Laboratory confirmed this is an acceptable method on July 9, 2017.
Region 04	Kevin Koporec	Superfund Health Risk Assessment	Teresa Shannon	513-569-7596	Shanna Alexander, Georgia Environmental Protection Division	4/6/2017	(3) Completed	No site	N/A		Request for assistance evaluating new uncertainty factors for Cobalt. SCMTSC sent an official response regarding the application of the uncertainty factor and no follow up questions were received. Completed.
Region 04	Kevin Koporec	Superfund Health Risk Assessment	Teresa Shannon	513-569-7596	Keith Tolson, GeoSyntec Consultants	6/9/2017	(4) On-Going	No site	N/A	N/A	Request for information on Zirconium Provisional Peer Reviewed Toxicity Values.  The request was forwarded to administration and STSC has performed a toxicity value search. Currently waiting on more information from administration. On-Going.

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Region 04	Kevin Koporec	Superfund Health Risk Assessment	Teresa Shannon	513-569-7596	Rick Frey, St. Mary's Riverkeeper	6/29/2017	(3) Completed	No site	N/A	N/A	Request for information on the EPIC (Environmental Photographic Interpretation Center) still existed. After research, we could not find a working phone number for the Center so he was referred to NERL (the division in which EPIC is under). Completed.
Region 05	Carolyn Bury	Ecological Risk Assessment	Mike Kravitz	513-569-7740	Marc Greenberg (OSWER/OSRTI-ERT [R02]) Katie Matta (R03) Bruce Pluta (R03) Carolyn Bury (R05) Bruce Duncan (R10)	7/13/2017	(1) In Progress				ERASC Request #021 Question: "Should we incorporate climate change issues in ecological risk assessments of contaminated sites?" Response Document Title: Climate Change Issues In Ecological Risk Assessments at Hazardous Waste Sites. Status Update: Response document is in initial stage of development.
Porion OF	Cariola John	Engineering	John McKenner	513-569-7415	Region 5	3/20/2017	(2) Completed	Thermo-Chem	Musicaran	MI	Dr. John McKernan provided assistance for this request. The RPM requested assistance and information so that the RPM could settle a dispute between Michigan DEQ and the PRP about testing for 1,4 - dioxane and how to potentially treat a groundwater plume of it. John identified expertise, and a document from Region 2 regarding sampling for, and treatment of, 1,4 - dioxane in a groundwater plume (from Combe Fill South Landfill superfund site). The non-optimized system described in the document was used temporarily, while a city waterline extension for the impacted neighborhood was constructed. This 'treatability report' document was available electronically, and was shared with the site RPM. No additional
Region 05	Fagiolo, John  Jenny Davison	Engineering  Engineering	John McKernan	513-569-7415	Region 5	11/5/2014	(4) On-Going	Valley Pike Volatile Organic Compound (VOC) Site	Muskegon	ОН	technical support for this site has been requested this quarter.  Drs. John McKernan and Ed Barth continue to provide technical support for the Valley Pike site. The site is now on the NPL Superfund site list in 2016, and a RPM from Region 5 was assigned. The focus of the support has been on applying a soil vapor extraction (SVE) system. The RPM has recently received permission to proceed with planning an SVE system for the site. Drs. McKernan and Ed Barth await the draft work plan and SVE system design. Drs. Barth and McKernan held a teleconference with the RPM this quarter, and are attempting to align a site visit with the RPMs arrival at the site in Q4 2017 or Q1 2018. Support for this site is ongoing.
Region 05	John Fagiolo	Groundwater	David Burden	580-436-8606	Region 05	4/3/2017	(3) Completed	Thermo Chem Superfund Site	Muskegon	МІ	Provided technical review comments on issues related to the 1,4 dioxane groundwater contamination at the site.
Region 05	Ramon Mendoza	Site Characterization and Monitoring	Chris Sibert John Zimmerman	702-798-2234	Region 05	11/5/2015	(4) On-Going	Pilsen Site	Chicago	IL	R5 is initiating a Removal Site Evaluation in the Pilsen Neighborhood in Chicago. One objective is to determine the industrial sources of lead contamination where multiple PRP's exist. SCMTSC is providing scientific advice and serving as QA/QC for the lab contracted by R5 to perform scanning electron microscope /energy-dispersive X-ray spectroscopy analysis. NERL Las Vegas is reviewing initial laboratory results from the contract lab and providing written comments.

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Program / Regional Office	Program / Regional Office Contact	Technical Support Center	Center Contact	Center Contact Phone	Requestor	Request Date	Status	Site Name	City	State	Description
Region 06	Mark Purcell	Engineering	John McKernan	513-569-7415	Region 6	12/11/2016	(1) In Progress	Grants Mining District (Jackpile, United Nuclear Corp., Homestake Mining Co.)	San Mateo Creek	NM	The ETSC received a request for Dr. Robert Ford to provide technical support for this site. The RPM has requested assistance in preparing documentation for and conducting a groundwater investigation (focused on metals such as uranium) for San Mateo Creek, in the larger Grants Mining District Superfund site. Due to the size and scope of this work, this support will continue into next quarter.
Region 06	Gary Miller, Carlos Sanchez Stephen Tzhone	Engineering Groundwater	John McKernan David Burden	513-569-7415 580-436-8606	Region 6	3/4/2016 5/9/2017	(3) Completed	San Jacinto Arkwood Superfund Site	Highlands Omaha	TX AR	The RPM in Region 6 requested technical support from Drs. Ed Barth and John McKernan for providing guidance to Region 6 for determining a site cleanup value for dioxin contaminated sediment based upon partitioning modeling for dioxin in sediment pore water. In response to the request, the ETSC developed a sediment cleanup value that resulted in water concentrations of dioxin that are below the standard for the state of Texas (TCEQ) of 7.8 x 10 -8 ug/L (as TCDD equivalents). A draft guidance report for sediment site cleanup values for dioxin contaminated sediment was produced, and shared with the Regional RPMs. Ed and John have begun writing a journal article based on the work conducted for the site. Since the site is politically sensitive, an attempt was made to remove the site name and location from the draft report, however since it would still be possible to identify the site without naming it, efforts to write a journal article have been put on hold. No additional technical support for this site has been requested this quarter.  Technical review of the site document titled "Work Plan for Surface Geophysical Investigation and Well Installation" for the Arkwood Superfund Site. It was concluded the proposed activities represent a good step in demonstrating capture of contaminated groundwater leaving the site.
Region 06	Katrina Coltrain	Site Characterization and Monitoring	Chris Sibert/Dale Werkema	702-798-2234	Region 06	11/16/2016	(1) In Progress	Tar Creek	Miami	OK	The SCMTSC is working with the GWTSC to assist the Site Remedial Project Manager better understand the groundwater-to-surface water interactions at the site. The goal is to provide a more efficient cleanup strategy that uses fewer Superfund dollars while also delivering better community protectiveness. A Tar Creek Site visit for all the parties occurred the week of January 18, 2017. The visit included stops at three locations of interest to observe whether the thermal imaging will be useful in identifying area or potential ground water discharge. Recommendations will be made on possible remediation technologies to be evaluated in the Feasibility Study (FS) based on the site visit and coordination between the team members.

### Q3 FY17

Key

(1) In Progress

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(2) On Hold

A request for technical support from the Region or Program Office has been made, but due to issues the technical support request is on hold (i.e. data has not been received, legal hold, conflict of interest, funding, etc.).

A technical support request has been submitted and a response has been provided to the Region or Program Office. No further assistance on this site is anticipated at this time.

(3) Completed (4) On-Going

A technical support request has been submitted and a response has been provided to the Region of Program Office. No further assistance on this site is analogated at this time.

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A technical support request has been submitted and a response has been provided to the Region or Program Office, however the Region/Program Office and/or the TSC anticipates further assistance will be needed on this site/issue in the near future.

7/33/2017 Date of status update (ERASC responses take an extended length of time to develop.)

Program / Regional Office	Program / Regional Office Contact	Technical Support Center	Center Contact	Center Contact Phone	Requestor	Request Date	Status	Site Name	City	State	Description
Region 06	Katrina Coltrain	Site Characterization and Monitoring	Chris Sibert Dale Werkema	702-798-2234	Region 06	6/5/2015	(4) On-Going	Wilcox Oil Company	Bristow	ок	SCMTSC is providing development and review support for site plans and reports being prepared with the EPA Emergency Response Team to complete geophysical investigations followed by a direct sensing investigation. The geophysical investigation will include Ground Penetrating Radar, Electro-Magnetic ground conductivity, and seismic studies, and will be scheduled late July or early August. The direct sensing investigations will be based on the findings of the geophysical investigation and will be coupled with geoprobe sampling, piezometer installation, and field testing. The direct sensing is tentatively scheduled for Nov/Dec. The long range plan is to use this information to develop a focused Feasability Study Plan and Feasability Study.
Region 07	Venessa Madden	Ecological Risk Assessment	Mike Kravitz	513-569-7740	Venessa Madden (R07)	7/13/2017	(4) On-Going				ERASC Request #017 Question: "What is the appropriate use of allometric scaling in ecological risk assessments?" Response Document Title: Body-Weight Scaling of Acute and Chronic Toxicity: Comparison of Health and Wildlife Perspectives, and Proposal for Refinement of Terrestrial Wildlife Assessments. Status Update: Internal peer review was completed. Comments have been addressed and External Review Draft is being prepared.
Region 07	Don Bahnke	Engineering	John McKernan	513-569-7415	Region 7	10/19/2011	(4) On-Going	Socioeconomic Impact from Lead Contamination (Omaha Lead)	Omaha	NE	Dr. Cynthia Yund is leading this research in ORD/NCEA. The project is designed to determine if there are societal impacts of lead exposure for those residing in and around the Omaha Lead Superfund site. ORD human subjects board approval has been renewed for 2017, and the work plan continues for retaining a statistical contractor for data analysis. A 'short report' was completed and delivered for the Region's consideration. Comments from all reviewers were integrated this quarter, and the short report was finalized. Region 7 was interested in the preliminary results from the short report, and their support is continuing the project with a target date for a larger report set for late 2017 or early 2018.

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(2) On Hold

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(3) Completed

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(4) On-Going

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7/33/2037 Date of status update (ERASC responses take an extended length of time to develop.)

Program / Regional Office	Program / Regional Office Contact	Technical Support Center	Center Contact	Center Contact Phone	Requestor	Request Date	Status	Site Name	City	State	Description
Region 07	Mark Doolan	Engineering	John McKernan	513-569-7415	Region 7	1/1/2014	(4) On-Going	Tristate Mining District	Joplin	мо	The Tri-State Mining (TSM) District covers approximately 2,500 square miles in southwest Missouri, southeast Kansas, and northeast Oklahoma. The District was one of the foremost lead and zinc mining areas in the world, and provided nearly continuous production for 120 years, ending in 1970. There are 3 large superfund sites associated with the TSM, each containing millions of cubic yards of exposed mining tailings and waste rock. Drs. John McKernan, Brian Dyson, Souhail Al-Abed and Mohamed Hantush (and their students and post-docs) are providing support and research for this site - investigating water and sediment data, providing trend information and developing a fate and transport model for dissolved metals and sediment in the TSM watershed, including Empire Lake. Dr. Al-Abed, Dyson, and McKernan held a call with the RPM and Liz Hagenmaier (RPM for additional operating units at the site) this quarter to discuss data and preliminary modeling results from the research focused on surface water and sediment. Additional information is being gathered this quarter, and a trip is being planned for visiting Joplin to discuss the results of this research with the regional stakeholders in KS and OK in Q4 2017 or Q1 2018.
Region 07	Justin Barker	Engineering	John McKernan	513-569-7415	Region 7	6/1/2013	(4) On-Going	West Lake Landfill	Bridgeton	мо	Dr. John McKernan, Dr. Ed Barth, David Carson, and Dr. Thabet Tolaymat continue to provide technical support to the Region in the form of site visits, reviewing and commenting on reports, and summarizing site data. Support activities continue to include participating in video and teleconference calls, and providing technical support for site characterization, sampling, and pre-design issues. Last quarter, final versions of the monthly reports for 2016 were provided to the Region for their records. Last quarter, the team also delivered a draft review of the PRPs work plan for an inert gas injection (IGI) emergency plan at the site. This quarter, final drafts of Q1 reports were delivered to the Region, and draft versions of Q2 2017 monthly site data reports were being prepared for the RPM.

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(3) Completed

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7/33/2037 Date of status update (ERASC responses take an extended length of time to develop.)

Program / Regional Office	Program / Regional Office Contact	Technical Support Center	Center Contact	Center Contact Phone	Requestor	Request Date	Status	Site Name	City	State	Description
Region 07	Brad Vann, Tom Mahler	Site Characterization and Monitoring	Felicia Barnett	404-562-8659	Region 07	2/10/2015 9/15/16	(1) In Progress	West Lake Landfill	Bridgeton	мо	SCMTSC developed a sampling plan for the outer area of the landfill using spatial statistical methods. The statistically valid sampling plan was used to assist in determining the extent of contamination outside the landfill. Now that the sampling is complete the SCMTSC has been asked to review the data and reports as written by potentially responsible parties, to determine key elements of these documents related to statistical analysis and that the statistically developed findings are supported by the site data. The PRPs have provided additional information regarding their input files for the use of ProUCL and the Region has met with the PRPs and has provided the data the was used to calculate exposure point concentrations (EPCs). The SCMTSC will be reviewing the PRPs use of ProUCL and providing any input or comments on the data sets that were used to generate these EPCs. Additionally the SCMTSC will be providing support to the Region in developing comments related to available data that was not utilized in the draft document. This will support Region 7 on how to direct the PRPs to account for this data. The EPCs will be used to determine remediation areas.
Region 08	Rebecca Thomas	Engineering	John McKernan	E12 560 7415	Region 8	9/23/2016	(4) On-Going	Bonita Peak Mining District	Silverton	CO	Dr. Barbara Butler is providing technical support for this mining request. There is interest from the project lead to investigate the use of innovative mine remediation technologies. The project team is looking to ORD to help screen potential technologies and identify good candidates for bench and pilot scale. The National Priorites List listing for the site has just been completed and are in the early stages of RI. However, this is a historical mine contaminated area, with over 45 mining sites and features in the watershed. The mining district includes Gold King mine. Barb is leading the effort in ORD to identify opportunities for using new and existing technologies such as active and passive treatment technologies for soil, ground water, surface water, seeps, tailings, waste rock, and so on at the mine sites in the watershed. The RPM requested assistance determining which contaminants need to be addressed on site and to what levels and how to use that information to determine the appropriate technology to use. Discussions to address this, and related questions, were held with OLEM and the Region this quarter. Ongoing plans include developing a decision tree and weighing remedial alternatives/options for the site.

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(3) Completed

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(4) On-Going A technical support request has been submitted and a response has been provided to the Region or Program Office, however the Region/Program Office and/or the TSC anticipates further assistance will be needed on this site/issue in the near future.

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		Center	Center Contact	Phone	Requestor	Request Date	Status	Site Name	City	State	Description
Region 08 Roger	er Hoogerheide - {	Engineering	John McKernan	513-569-7415	Region 8	7/14/2014	(4) On-Going	Carpenter Snow Creek Site (Silver Dyke)	Neihart		The ETSC continues to service technical support requests from the Regional contact for assistance in mine influenced water remediation. Drs. Souhail Al-Abed, Barbara Butler, Ed Barth and John McKernan perform consulting services as needed for the Regional client for the Carpenter Snow Creek (CSC) and Barker/Hughesville Superfund sites. In past quarters, column testing reports to evaluate anaerobic bioremediation, and a document on potential aerobic/wetland treatment systems for addressing mining influence water contamination at and near the site have been submitted to the Regional contact. Technical support continues this quarter and next - during the week of July 25th, Ed Barth will travel to Helena, MT to discuss various technologies with the RPM and their contractors to discuss the Remedial design for the mining sites as well as plans to augment natural attenuation of DNAPL plumes at both the Somers BNSF site near Flathead Lake, MT and the Idaho Pole Site in Bozeman. Ed will also meet with Montana State University to discuss their research in microbial induced mineral coatings for mine tailing piles. Souhail Al-Abed will also be traveling to MT mining sites for this RPM to assist the RPM and their contractors in remedial design planning with the state. These requests are ongoing.
	J				J						The site PRP, AIG has prepared a pilot study work plan for metals recovery at the Iron Mountain site. The work plan proposes to test the viability of a metals recovery pretreatment process through the operation of a pilot scale plant. This quarter, the RPM requested a review of the copper (and cadmium) recovery process pilot study work plan for the site. Dr. Barbara Butler accepted this task, and provided a draft review of the work plan, with observations and comments. Support for this site is
Region 09 Lily Tar	Tavassoli [	Engineering	John McKernan	513-569-7415	Region 9	12/26/2016	(4) On-Going	Iron Mountain Mine	Redding		ongoing this quarter.  Dr. John McKernan and Steve Rock, with their USGS colleague Dr. Janes Landmeyer are conducting an Inter-Agency Phytoremediation Workshop for Region 9 HQ the week of July 17th. Anna-Marie Cook (STL Region 9) and CDR Bill Robbison provided pivotal logistics and coordination for this workshop. The purpose of the workshop is to further knowledge of Phytoremediation Applications For Contaminated Site Cleanup in the Regions, and particularly at sites in Region 9. The workshop will be held at the National Aeronautics and Space Administration / Ames Facility in Mountain View, CA. This training workshop will provide participants with an opportunity to learn, examine and discuss current and emerging approaches related to phytoremediation to control sources, plumes and vapor inhalation threats at contaminated sites. The workshop is aimed at contaminated site remedial project managers, on-scene coordinators, remediation researchers and practitioners; federal, state, local and tribal decision makers; and others interested in the

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(3) Completed A technical support request has been submitted and a response has been provided to the Region or Program Office. No further assistance on this site is anticipated at this time.

(4) On-Going A technical support request has been submitted and a response has been provided to the Region or Program Office, however the Region/Program Office and/or the TSC anticipates further assistance will be needed on this site/issue in the near future.

7/33/2037 Date of status update (ERASC responses take an extended length of time to develop.)

Program / Regional Office	Program / Regional Office Contact	Technical Support Center	Center Contact	Center Contact Phone	Requestor	Request Date	Status	Site Name	City	State	Description
Region 09	Yarissa Martinez	Groundwater	David Burden	580-436-8606	Region 09	3/9/2017	(3) Completed	Montrose Superfund Site	Los Angles	CA	Provided technical review comments on the Draft TRS Group, Inc. Electrical Resistance heating (ERH) Pilot Test Work Plan for the Montrose Superfund Site.
Region 09	Queenie Mungin-Davis, Rebecca Jamison, R9	Site Characterization and Monitoring	Felicia Barnett, Dale Werkema	404-562-8659	HQ UST	3/9/2017	(3) Completed	Davis Chevrolet	Tuba City	AZ	HQ Underground Storage Tank on behalf of Region 9 asked for assistance in reviewing the Geophysical Dipole-Dipole Resistivity/Induced Polarization (IP) Repor for this site. Generally, petroleum hydrocarbon plumes respond well to enhanced biological treatment; however this site has been extremely recalcitrant and has spread beneath to the much smaller nearby Hopi Tribal area. Review comments were provided on May 8, 2017. The geophysical review noted that it is evident that there are 3-dimensional geo-electrical changes within this site. The cause of the changes could be either geologic (i.e., permeability, porosity, fracture) or biogeochemical due to the contaminant. The dipole-dipole surveys were collected along transits and reported as 2D sections. Trying to correlate 1D well data with 2D geophysical data is difficult and inherently uncertain since this is a 4D problem (i.e., x, y, z and time). It was recommended that a multi-frequency electromagnetic induction survey to compliment and add to these results by providing a 3D representation of the conductivity of the subsurface, which possibly could map and characterize these geo-electrical variations at higher resolution and dimensions. Furthermore, since some data show iron reduction, there could be magnetic susceptibility changes within zones undergoing biomineralization so a high resolution cesium-vapor magnetic survey is recommended. At present it appears this site does not contain a broad plume, but rather fingers of higher concentration within or near fractures surrounded by lower concentrations in the pore space adjacent to the fractures. Such a 3D investigation may help understand this distribution, correlate, and corroborate other subsurface investigations, and guide long-term remediation decisions and efforts.

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Program / Regional Office	Program / Regional Office Contact	Technical Support Center	Center Contact	Center Contact Phone	Requestor	Request Date	Status	Site Name	City	State	Description
Region 09	Mark Ripperda	Site Characterization and Monitoring	Felicia Barnett	404-562-8659	Region 09	9/28/2016	(4) On-Going	Former Quivira Mine	Church Rock	NM	Region 9 is currently planning a removal effort to remediate the areas around four ventilation shafts (vent holes) associated with the former Quivira Mine (uranium) site located in the Church Rock, New Mexico. The SCMTSC was requested to provide statistical support during the following four phases:  1. Planning – providing consultations and review of the Design Reports including procedures and other documentation to determine the best technical approach to meet EPA's Data Quality Objective (DQOs) and Measurement Quality Objectives (MQOs).  2. Reviewing Data – providing review of data collected by EPA during and after implementation of the Removal Action.  3. Consultations – providing on-going consultations to EPA's and its other contractors during the work.  4. Report Deliverables – review and provide comments on the SAP and the Removal Action Report and assist with the statistical evaluation of the site-specific data as needed.  The support will address concerns about correlation between field instrumentation and laboratory analytical results since clean up and worker safety are related to accurate field analysis. SCMTSC recommended the use of a robust regression analysis model to estimate excavation areas where enough sampling data is available. This will assist in limiting the need for additional sampling during the removal.

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(3) Completed (4) On-Going

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Program / Regional Office	Program / Regional Office Contact	Technical Support Center	Center Contact	Center Contact Phone	Requestor	Request Date	Status	Site Name	City	State	Description
Region 09	Lily Lee	Site Characterization and Monitoring	Felicia Barnett	404-562-8659	Region 09	2/8/2017	(1) In Progress	Hunter's Point	San Francisco	CA	The Navy's contractor was caught falsifying site data, and the Region requested assistance with oversight of the re-sampling and verification of the actual levels of contamination still remaining on the site. This falsification of the base closure data has delayed the turning over of the property for reuse by the city. SCMTSC has already provided initial review comments on the Navy's verification process. SCMTSC review indicates the potential for missing areas that may still need resampling to verify actual contamination and remediation. SCMTSC recommended a different approach using effective univariate and multivariate/multidimensional statistical and graphical methods to identify potential suspicious/anomalous patterns present in data sets collected from the various parcels of the Site. Graphical displays of the multivariate methods are extremely valuable. Effective pattern recognition graphical methods provide added insight into the patterns present in a data set which may not possible to identify and comprehend based upon the information provided by test statistics. Proper re-characterization of the site will ensure that the remediation of the property meets protective standards for human health in this highly desirable reuse area.
Region 09	Anna Marie Cook	Site Characterization and Monitoring	Chris Sibert John Zimmerman	702-798-2234	Region 09	9/11/2014	(4) On-Going	N/A	N/A		SCMTSC is providing information on vapor intrusion support to the Region 9 VI workgroup.
Region 09	ZiZi Searles	Site Characterization and Monitoring	Felicia Barnett	404-562-8659	Region 09	12/3/2015	(4) On-Going	El Paso Natural Gas Mine Sites in the Western Navajo Nation	Cameron	AZ	Region requested support from a statistician experienced with the specific issues associated with measuring the random events associated with detecting radioactivity and differentiating elevated radiation levels from background levels. The SCMTSC statistician is working closely with project health physicists (EPA and its contractors) in the development and reporting of specific tasks. The scope of work for assistance will vary depending on the phase of the project.  SCMTSC provided the Region with Statistical methods to perform regression analysis and background evaluations on 2/29/16.  Addressed statistical questions of another EPA contractor regarding developing background reference areas and selecting a reasonable achievable value for the correlation between field count data and lab data reported in pCi/mg. Performed correlation analysis on several data sets provided by the contractor working on behalf of EPA and assisted the contractor in developing a white paper, "Selection of Cleanup Level and its Affect on Final Status Survey."  Reviewed and delivered a technical document, "Statistical Methods for the Work Plan - Western Navajo Nation Uranium Mines," summarizing statistical methods to be included in the work product.  Reviewed several documents prepared by El Paso Natural Gas and prepared preliminary statistical comment on the on-going work. The technical support will provide the Region with accurate characterization of the areas requiring remediation.

### Q3 FY17

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(1) In Progress (2) On Hold

(4) On-Going

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Program / Regional Office	Program / Regional Office Contact	Technical Support Center	Center Contact	Center Contact Phone	Requestor	Request Date	Status	Site Name	City	State	Description
Region 10	Andrea LaTier	Ecological Risk Assessment	Mike Kravitz	513-569-7740	Sharon Thoms (R04) Glenn Adams (R04) Bruce Duncan (R10)	7/13/2017	(4) On-Going				ERASC Request #018 Question: "Geochemical Evaluations—Statistics or no Statistics?" Response Document Title: Separating Anthropogenic Metals Contamination from Background: A Critical Review of Geochemical Evaluations and Proposal of Alternative Methodology. Status Update: Response document is in final preparation (i.e., External peer review was completed. Comments are being addressed.).
Region 10	Andrea LaTier	Ecological Risk Assessment	Mike Kravitz	513-569-7740	Jean Zodrow (R10)	7/13/2017	(4) On-Going				ERASC Request #020 Question: Developing a tool to understand and assess the bioavailability of contaminants in soils. Response Document Title: Terrestrial Metals Bioavailability: A Literature Derived Decision Rule for Ecological Risk Assessment. Status Update: External Review Draft is completed.
Region 10	Mike Cox	Ecological Risk Assessment	Mike Kravitz	513-569-7740	Marc Greenberg (OSWER/OSRTI-ERT [R02]) Katie Matta (R03) Bruce Pluta (R03) Carolyn Bury (R05) Bruce Duncan (R10)	7/13/2017	(1) In Progress				ERASC Request #021 Question: "Should we incorporate climate change issues in ecological risk assessments of contaminated sites?" Response Document Title: Climate Change Issues In Ecological Risk Assessments at Hazardous Waste Sites. Status Update: Response document is in initial stage of development.
Region 10	Kim Prestbo	Engineering	John McKernan	513-569-7415	Region 10	9/11/2015	(4) On-Going	Coeur D'Alene Superfund Site OU-3	Coeur d'Alene	WA	Drs. Todd Luxton, Kirk Scheckel, Mark Johnson, Brian Dyson and John McKernan are providing technical support for the Coeur d'Alene (CdA) operable unit (OU)-3 site including the lakes, wetland and CdA river west of Bunker Hill (OU-1 and 2). This team continues to assist with document reviews for capping and amendment proposals, as well as other remedial design input for this mega-site. Planning for the approved Regional Sustainable Environmental Sciences supported Decision Analyses for a Sustainable Environment, Economy, and Society (DASEES) site evaluation is ongoing. Dr. Brian Dyson and Kira Lynch traveled to the site this quarter for a stakeholder meeting related to the DASEES project. An updated version of the CdA Basin cleanup plan has been generated and shared with the collaborators for comment. This included a revised sampling and study plan for Lane Marsh. This site will continue to be studied by ORD soil scientists to identify remedial alternatives for Lane Marsh, and its use as a habitat for migratory birds. Technical support for this site is ongoing.

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(3) Completed

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Program / Regional Office	Program / Regional Office Contact	Technical Support Center	Center Contact	Center Contact Phone	Requestor	Request Date	Status	Site Name	City	State	Description
Region 10	Kira Lynch	Engineering	John McKernan	513-569-7415	Region 10	5/12/2014	(4) On-Going	Upper Columbia River Contaminated Sites	Kettle Falls		Drs. Todd Luxton, Kirk Scheckel and Mark Johnson are providing technical support for the Upper Columbia River valley Superfund site. They are involved in the remedial investigation/feasibility study to either remediate or immobilize metals in the soil along the river valley. This effort is related to the Coeur d'Alene support being provided to Region 10, as the same group of experts is being consulted. Drs. Scheckel, Luxton and Johnson traveled to Region 10 this quarter for the face-to-face meetings with the stakeholder representatives, EPA RPM, and PRP in Kettle Falls, WA. This meeting included seeing the site, and beginning initial application and testing of remedial options for the site. The PRP is moving an amended draft remedial plan with initial site observations from remedial pilot results this quarter, with review and input from the other parties involved. Another meeting is planned in Q4 to gather all the parties either in person or by teleconference to discuss the path forward and additional sites to be tested. Technical support for this site is ongoing.
Region 10	Helen Bottcher	Site Characterization and Monitoring	Chris Sibert /Dale Werkema	702-798-2234	Region 10	11/7/2016	(1) In Progress	Wyckoff / Eagle Harbor	Bainbridge Island in Central Puget Sound	WA	SCMTSC has been asked to assist in reviewing a sampling plan and results for the use of a marine induced polarization sampling method at the site. The Region is preparing to collect another round of samples on the surface of the cap, and some shallow cores early 2017 and plans to test the method the same week to compare the results.  If the results are proven comparable, marine induced polarization sampling could be an option as a "first sweep" sampling tool for assessing the condition of the subtidal cap at the site. The cap is large – more than 70 acres – and sampling and analytical chemistry costs to show that it remains protective is expensive. If this tool, along with bathymetry data, could be used to assess the long term functioning of the cap, it would provide a significant cost saving for monitoring the cap's effectiveness.

### Q3 FY17

Key

(1) In Progress

A technical support request has been submitted to a TSC and they are currently working on a response, but at the time of the quarterly report a response to the Region or Program Office has not been produced.

(2) On Hold

A request for technical support from the Region or Program Office has been made, but due to issues the technical support request is on hold (i.e. data has not been received, legal hold, conflict of interest, funding, etc.).

A technical support request has been submitted and a response has been provided to the Region or Program Office. No further assistance on this site is anticipated at this time.

(3) Completed A technical support request
(4) On-Going A technical support request

A technical support request has been submitted and a response has been provided to the Region or Program Office, however the Region/Program Office and/or the TSC anticipates further assistance will be needed on this site/issue in the near future.

7/33/2037 Date of status update (ERASC responses take an extended length of time to develop.)

Program / Regional Office	Program / Regional Office Contact	Technical Support Center	Center Contact	Center Contact Phone	Requestor	Request Date	Status	Site Name	City	State	Description
Region 10	Joe Wallace	Site Characterization and Monitoring	Felicia Barnett	404-562-8659	Region 10	12/1/2016	(2) On Hold	Gay mine	Fort Hall Indian Reservation	ID	SCMTSC has been asked to assist the Region with stochastic assessment of sampling adequacy/frequency for the site and define acceptable levels of uncertainty for areas not sampled. SCMTSC has reviewed site data and identified and bracketed critical statistical elements required for the sampling and risk assessment. This has necessitated further Regional discussion on planning needs. Armed with this clarifying information, the Region is assessing how to establish those statistical variables which can then be used to guide necessary additional data collection.  Once the Region have determined a rationale supporting the selection of defensible Reasonable Maximum Exposures, Change Over Values, and Upper Confidence Limits using the information from the SCMTSC analysis, SCMTSC will respond to any additional concerns the region has in developing a statistical sampling process to support the site investigation and address uncertainty related to the site sampling plan.
Region 10	Elly Hale	Site Characterization and Monitoring	Felicia Barnett	404-562-8659	Region 10	1/5/2017	(1) In Progress	Lower Duwamish Waterway	Seattle	WA	SCMTSC is providing statistical assistance with sampling approach - through discussion, possibly limited review of PRP documents. Currently have PRP-developed sampling approach with statistical basis, and EPA comments. Suitable statistical approach needs to be resolved. SCMTSC provided comments on the approach and assisted the Region with discussions with the PRP. OLEM requested that an additional trend analysis be performed on the PRP's proposed sampling to calculate what magnitude will be able to be detected in each media with a confidence of 90% and a power of 80%. The request was clarified to be sure that the correct trend information will be supplied to OLEM and additional work is underway. The Region and OLEM will use the analysis to determine if the sampling proposal is adequate or additional sampling should be contained in the plan.